PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, APRIL 15, 1876.

ORIGINAL COMMUNICATIONS.

PALPITATION: ITS VARIETIES AND THEIR TREATMENT.

BY J. MILNER FOTHERGILL, M.D. Edin.; M.R.C.P. London;

Assistant Physician to the West London Hospital, Assistant Physician to the City of London Hospital, for Diseases of the Chest, Victoria Park.

PALPITATION is not a disease per se. It is, however, an objective sign as well as a subjective phenomenon, which often calls for treatment. We have discarded the old plan of regarding a prominent symptom as the disease itself. Palpitation, like epilepsy and chorea, is rather an indication of something wrong than it is the actual disease. Yet it will be found convenient in practice to retain these expressions, especially in relation to therapeusis. Epilepsy means a discharge from motor centres, whether that discharge be due to a tumor pressing on the centres, or to some instability in the relations of the convolutions to their blood-supply, which depends on changes too fine to be recognized by our vision, even when aided by the microscope. Chorea is a disturbance in the motor departments of the cerebro-spinal nervous system, by which purposeless and imperfectly rhythmical movements are set up; in nature and in character approaching the rhythmical movements of the idiotic, which resemble the rhythmical movements of the sympathetic nervous system rather than the ordinary movements of the cerebro-spinal system.

Such is chorea, whether it is due to some fright or to the modifications of nutrition produced by an embolus. The different causal relationships of these symptoms, however, point to varied lines of treatment, and according to the causation will be the remedial measures selected. So it is with palpitation. Of old, all maladies were regarded as of a dynamic character: consequently, palpitation of the heart was a too-powerful stroke, and hypertrophy was a spontaneous, indeed rather a wanton, overgrowth. The treatment was planned accordingly, and sedatives were the agents to be employed to relieve the one, and venesection and starvation the means of subduing the other. A certain amount of success followed such plan; that is, in suitable cases it was successful; but the evil effects in other cases were equally, if not more, palpable. Why and how the plan succeeded in some cases and failed in others will become apparent ere this article closes.

Palpitation may occur under three sets of associated conditions. It is found when the heart is itself at fault; it also exists where the heart itself is sound, but where there is a disturbance in the blood-pressure in the arteries; and it is at other times the outcome of some disturbance of the normal equilibrium existing in the complex nervous arrangements of the heart. According to its associations must be its treatment. The measures adapted to one set of circumstances are worse than useless under others. We will take first the palpitation of primary heart-failure. It cannot be said with truth that this is the commonest associated condition of palpitation, but it will keep the subject most clearly intelligible if this form be taken first. When the heart's power is failing, and it is unequal to the performance of its duties, then its quiet, unperceived stroke gives way to an excited action, which is both perceptible to the observer and recognizable by the subject or patient. The normal action of the heart is steady and rhythmical. In palpitation the stroke is excited and irregular. When associated with failure in the heart itself, palpitation is like the labored effort made by an exhausted man when carrying on with difficulty some action which ordinarily can be executed with ease and almost unconsciously. The effort made is more obviously an effort, but it is not suggestive of increased vigor, indeed rather of waning power. The readiest tests of the truth of this observation are the effects of quietude and of exertion. When the body is at rest, as in bed, and the demands upon the heart reduced to a minimum, then it becomes comparatively equal to its work, and its stroke is once more quiet and regular. But let an effort be made, or some continued exertion be undergone, and then the palpitation is aggravated, and is commonly combined with more pronounced irregularity, or even intermittency. Yet, if palpitation be, as used to be asserted, a too-powerful action of the heart, the demand of effort ought to be a ready and certain means of relieving it; a new balance

should thus be struck. How the facts really stand, however, is too well known to permit of any doubt or to require further elucidation of the matter.

Palpitation, then, is often the active outcome of adynamy. It is a labored effort, and not an over-powerful stroke. It is the evidence of failing power, and not of superabundant energy. Early observers, like Hope, recognized that in persons with dilated hearts, palpitation was induced by slighter causes than were sufficient to excite it in other persons. It is in this form essentially connected with impaired or insufficient muscular power, whether valvular disease exist or not. Indeed, palpitation cannot be said to be directly connected with disease of the valves. As long as the valvular lesion is met by compensatory hypertrophy of the muscular walls, palpitation but rarely occurs. But when that compensatory growth is insufficient, or when it is itself wearing out, then palpitation returns. Niemeyer says of palpitation, "This distressing subjective symptom often ceases when the dilated heart becomes hypertrophied, and returns when the hypertrophy begins to undergo degeneration." It is found in its most marked forms in dilatation combined with hypertrophy. Its presence, however, indicates that the hypertrophy is insufficient to maintain the new equilibrium now demanded betwixt the power of the heart and the difficulties with which it has to contend. When the hypertrophy is efficiently compensatory, palpitation is not found; when it is wearing out, and thus becoming insufficient, palpitation shows itself. The inference to be drawn from this is unmistakable enough, and the line of treatment to be pursued is distinctly indicated.

The first step to be taken is to reduce the demand upon the heart by quiet. The habits of an invalid will often of themselves suffice to relieve a palpitating heart without any medicinal treatment. It is a very common thing now to see a person with organic disease of the heart sent to bed in a hospital ward, and for the physician to point out to his accompanying students the daily improvement in the symptoms—the palpitation, the dyspnœa, etc.—under the simple plan of treatment. The heart, unequal to the demands upon it when exertion was required, and losing ground day by day, begins to recover under the diminished call upon it, and is not only equal to the demands upon it, but improves somewhat each day. Such is one factor of the treatment; and it is well to commence the treatment with a few days of quiet in all such cases, and, if possible, with a day or two in bed.

Next come the means of acting directly upon the heart itself. The most notable of these is digitalis; but belladonna, ergotin, strychnine, and other agents have been used in many cases with advantage. Under the use of digitalis the heart's stroke becomes steadier, firmer, slower, and less excited. In fact, there is a return to the normal beat, or, at any rate, a return towards it. Whether digitalis attains this end by paralyzing the terminal ends of the vagus in the heart, or it acts by a stimulant and tonic action upon the cardiac ganglia, is immaterial to the present consideration. Its administration must be directed by the circumstances of the case. If the attack be of an acute character, accompanied by dyspnœa, it will be well to give fifteen or twenty drops of the tincture of digitalis, with five grains of the carbonate of ammonium, and half a drachm of spirits of chloroform, in any suitable vehicle, at once, and to repeat the dose in an hour or so, if desirable. At the same time, it is not amiss to give alcoholic stimulants, which stimulate the heart and dilate the peripheral vessels, repeatedly and in full doses. If the attack be severe, it is desirable to put a large, hot poultice over the front of the thorax. Heat is a powerful stimulant to the heart,—one of the most powerful known,—and by such outward application, and by hot fluids taken into the stomach, its contractions may be strengthened and the palpitations relieved. If, however, the attack be rather subacute, recurrent, or persistent, then a more permanent line of action is demanded. Under these circumstances, in addition to keeping the patient very quiet, it is well to exhibit digitalis in ten-drop doses of the tincture, or half-ounce doses of the infusion, three times a day, along with some iron. At times the digitalis may be combined with the ammonia, citrate of iron, and carbonate of ammonium, in a bitter infusion; at other times it may be given with the citrate of iron and quinine, and a few drops of the liquor strychniæ. In chronic cases, where the treatment also must be chronic, I prefer to

use the powder in pill. Half a grain to a grain, with a little sulphate of iron and some capsicum powder, in aloes and myrrh pill, is an excellent remedial measure, possessing the advantages of being tasteless and of being of convenient bulk, while in such form iron does not affect the teeth. The taste of digitalis and iron in mixture is nauseous, and in time becomes intolerable, while many patients do not like to have medicine-bottles about, and would infinitely prefer instead their pill-box, with its gross of pills, one of which may be taken twice or three times each day shortly after meals. The bowels should be attended to, and these pills will usually achieve that end, too; and the dietary should be liberal, nutritive, and easily digestible. The supper should be light and the breakfast substantial. A belladonna-plaster may often be worn over the heart with advantage. It is well, however, for the prescriber to be on his guard against possible contingencies therefrom. He may chance to be called to his patient, who is in great alarm, one iris having completely disappeared, or nearly so, for the time being. Ladies are most subject to these unusual manifestations. Of blisters over the precordial region I have no experience.* In all cases the generative expenditure should be carefully regulated.

Such are the lines of treatment to be pursued when palpitation is due to failure in the heart itself.

Palpitation commonly enough shows itself, especially in middle age and advanced life, under a different series of circumstances, where the heart is secondarily affected. The heart itself may be quite sound, in fact may be to some extent hypertrophied, or it may be somewhat weak or dilated, especially in females. But, in either case, the palpitation is due to causes by which the heart is consequentially affected only, and not primarily at fault. Of course, where it is rather weak or somewhat dilated, palpitation is most pronounced, as might be anticipated. The circumstances under which this form of palpitation is found are those of imperfect or insufficient elimination of nitrogenized waste. As pointed out in a previous communication to *The Philadelphia Medical Times* (Atheroma, Aug. 7, 1875), when the blood is surcharged with effete nitrogenized matter, contraction of the peripheral arterioles is induced, the blood-pressure is raised, the heart becomes hypertrophied, especially the left ventricle; and betwixt the contracted arterioles and the enlarged left ventricle the blood-pressure in the arteries is maintained at an abnormal height. The hypertrophy of the left ventricle in such conditions of renal insufficiency was known to James, of Exeter, to Bright, who associated it with obstruction to the blood-flow, and has been described by many writers. The permanently thickened muscular walls of the arterioles in such chronic disease have been demonstrated by George Johnson, Traube, Grainger Stewart, and Ringrose Atkins; and the condition is now generally admitted, though it has been opposed by Sir William Gull and Dr. Sutton. When, then, the blood is more impure than usual, an increase takes place in the arteriole contraction, the blood-pressure rises, and the left ventricle becomes embarrassed, the consequence of which is that palpitation shows itself. Where there is much hypertrophy, palpitation comparatively rarely occurs, and rupture of a cerebral artery, from the high blood-pressure within the vessels, is not at all an uncommon event. But where the hypertrophy is combined with dilatation then palpitation is quite common. The hypertrophy of the left ventricle is not nearly so often pure and uncomplicated with dilatation in women as in men, and consequently this form of palpitation is usually found in women; it is, however, also found in men, and in them chiefly when the hypertrophy is yielding under a gradually advancing fatty degeneration of the muscular structure and dilatation is setting in. Here the condition of cardiac embarrassment, with its outward indication, palpitation, is due to a vitiated state of the blood.

Under the circumstances, the treatment must be adapted to the exigencies and requirements of the case. Here it is not desirable to give digitalis, and rest furnishes little or no relief. Instead of acting directly upon the heart, it is desirable to improve the condition of the blood, by increasing the activity of the depuratory organs, and cutting down the amount of nitrogen in the blood.

For the attainment of more perfect elimination it is well to commence with a

* Balfour (Diseases of the Heart, 1876) says blisters excite the heart and irritate the patient.

sharp cathartic, containing alkaline salts, as a pill at bedtime, and a seidlitz powder in the morning. If the tongue be foul, and still more if the fur be of a yellow or brown shade of color, the pill may contain a little mercury with advantage. Citrate of potassium may be taken every morning in sufficient dose to be purgative, or Carlsbad water, the bitter water of Friedrichshall, or other water of allied character and similar properties. In addition to this, a mixture of the following character is useful:

℞ Pot. iod., gr. iv;
Pot. bicarb., gr. vi;
Inf. buchu, ℥i,

three times a day before meals, to be washed down with a tumblerful of water. This is my favorite prescription, and the buchu seems to be as efficacious as the colchicum, more commonly used, while it is free from the dangerous properties of the latter. The diet should consist of fish, of farinaceous food, or fruit; and beef-tea, soups, and brown meats should be interdicted, as adding to the nitrogenized matter to be got rid of. By such means the palpitation, with its consequent or accompanying unpleasant sensations, will be relieved. The bath may be resorted to, in order to excite the action of the skin, which is often defective in these cases; and this increased cutaneous action produces more perfect blood-depuration. The skin should be warmly clad, and its activity promoted.

For the immediate relief of this condition, the nitrite of amyl is eminently well suited. Lauder Brunton found it to give relief at once to an intractable case of angina pectoris, which had resisted all other measures; and it has been used by others with advantage in like cases. It must be borne in mind that the mystery of angina pectoris has been penetrated. It is not due to spasm of the heart. It is not, in its true form, an affection of the nervous system. It is a failure of the heart, due to a sudden increase in the blood-pressure in the arteries, taking its rise in arteriole spasm. The sphygmograph has revealed this. The difference betwixt the form of palpitation now being considered and angina is but one of degree, and perhaps to some extent of individual peculiarity. Imperfect attacks of angina alternate with palpitation, or occur in some persons where palpitation will be found in others, the causation in each case being the same, and the treatment required closely allied. My practice being entirely consulting, the opportunity is not afforded me of seeing these cases during the attack of palpitation, but there is every reason to infer that such use of nitrite of amyl would be most beneficial, and I recommend it to such readers as have, in large family practice, opportunities for trying this agent. Three to five drops on a piece of cotton-wool, held to the nostrils so that the vapor may be inhaled, will be found to produce dilatation of the arterioles, as seen in the flushing of the face. The odor is pleasant, and with such doses there is no danger. I have observed the effects of inhalations of amyl upon my hospital patients with hypertrophied hearts, atheromatous vessels, and accentuation of the aortic second sound, for some little time now. The effect is most marked. The pulse becomes soft and compressible; the sharp second sound and the slow, stout ventricular blow pass at once into the sounds of a febrile condition, while the contractions are much more frequent. It has not been my good fortune to hit upon a patient suffering from palpitation at the time of the inhalations, so no positive assurance can be given that such treatment will be successful; but there is every reason to believe that such would be the case from the phenomena observed. The effects of the inhalation soon pass away, but it could be repeated. There is, indeed, ground for hope that in such measure we have a most promising treatment of one form of palpitation.

In the treatment of the palpitation associated with secondary heart-failure there is one complication which calls for recognition, and which must be allowed for in the treatment; and that is a certain amount of failure in the heart itself. In cases where the heart is dilated, with only more or less hypertrophy, this condition of the heart must be attended to, and the line of treatment just described may be too directly depressant. With some persons potash, in all its forms, is very depressing. It is a muscle-poison in large quantities; and, in conditions of enfeebled or dilated heart, it is well to add some digitalis to the alkaline mixture. But here the digitalis is rather to counteract the effects of the potash than forming the integral treatment essentially, as in the form of palpitation first described.

It is always well to follow up the mixture of iodide of potassium and bicarbonate of potassium with the substitution of the potassio-tartrate of iron for the iodide. This form of iron goes well with the bicarbonate of potassium, and is useful in the convalescence of these cases, just as it is in the convalescence from acute or subacute rheumatism, where potash and iron are alike indicated.

In both these forms of palpitation alcohol is useful. It stimulates the action of the heart, while it dilates the peripheral arterioles, so lowering the blood-pressure in the arteries. In the first form of palpitation it is of much service, but it is more useful in the second form. Both in palpitation due to secondary heart-failure and in angina pectoris, whether complete or imperfect, alcohol, especially with hot water, may be administered with advantage.

Hysterical palpitation is closely allied in its nature to the form of palpitation just described. During the hysterical paroxysm the extremities are cold, and the arteries are contracted and corded, while there is a free secretion of limpid urine,—the evidence of high arterial tension. For the relief of this condition alcohol is very useful, but there seems every reason to anticipate the best possible results from the inhalation of the nitrite of amyl. Unfortunately, opportunities for seeing hysterical paroxysms are almost confined to family practice, and I have no personal experience in the matter. Nevertheless, it seems probable that the treatment of hysterical attacks, and especially of the concomitant palpitation, will in the future consist of nitrite of amyl inhalations. A small scent-bottle, containing nitrite of amyl, and a piece of cotton-wool on which to inhale it, could easily be carried by each hysterical lady, and she could either have an inhalation when she felt an attack coming on, or those about her could readily resort to it: an effective means in an elegant form, and of a not disagreeable character, would thus be furnished.

There are forms of neurosal palpitation where there is no rise in the blood-pressure, and where the abnormal state seems to depend upon some disturbance in the equilibrium existing betwixt the different nervous arrangements of the heart. In these cases the heart will be found acting with much excitement, but the radial pulse is weak and readily compressible. Not uncommonly there is mixed up with the palpitation a certain amount of irregular or intermittent action. We are indebted to B. W. Richardson, F.R.S., for a clear and lucid exposition of that form of cardiac intermittency which is found to be purely neurosal and unconnected with any organic disease. Such intermittency is far from uncommon, and is usually found along with the form of palpitation now being described. The causation of each is the same, and they differ from each other only in degree. The researches into the ganglia of the heart are not yet sufficiently complete for any speculation as to the nature of that disturbance of the nervous balance which causes palpitation, as to whether it is due to some abnormal activity in the accelerating nerves, or takes its origin in some unusual activity in Bidder's ganglion.

The most satisfactory treatment of this form of palpitation consists of the combination of bromide of potassium with digitalis, say fifteen grains of the first with five drops of the tincture of digitalis, three times a day. This will usually be found efficacious, not only as regards the palpitation, but even as to the general condition of nervousness which often accompanies it. The sedative effect of the bromide upon all nerve-centres is very useful, while the digitalis aids it to tranquillize the heart, and, betwixt the two, relief is attained usually readily. It is also not rarely desirable to prescribe a belladonna-plaster over the region of the heart in addition. Of course, in the treatment of such a neurosal affection it is well to cut off every form of irritation and everything which tends to create nervous excitement. The mind and body should both be kept as calm and tranquil as is possible. The alimentary canal should be attended to; the condition of the reproductive system ought to be carefully scrutinized, and the habits of life taken into consideration. Where there is a lack of tone in the nervous system, it is well to give the digitalis with hydro-bromic acid, in which quinine readily dissolves, so as to furnish a tonic in the mixture. Where there is anæmia, the bromide and the digitalis may be combined with the potassio-tartrate of iron, or a few drops of some preparation of iron may be taken twice a day after food with advantage.

Finally, for the satisfactory treatment of

palpitation it is necessary first to discriminate the form of the palpitation, and then to select the measures adapted to its relief. The treatment, indeed, must rest upon an accurate diagnosis, not only as to the affection itself, but also as to its causal relationships.

NOTES OF HOSPITAL PRACTICE.

ORTHOPÆDIC HOSPITAL AND INFIRMARY FOR NERVOUS DISEASES.

Reported by WHARTON SINKLER, M.D., Attending Physician.

DURING the past two years the number of patients in attendance at the department for nervous diseases of the Philadelphia Orthopædic Hospital has increased greatly. For example, in the year 1873 there were 256 nervous patients, in 1874 there were 427, and in 1875 the number of new cases reached 469. In the surgical department there was an almost equal number of patients.

These cases include all varieties of the most interesting nervous diseases; and it may be of interest to the readers of this journal to know something of the practice at this institution. Among the cases in 1875 there were 103 of neuralgia of various types, 31 of chorea, 36 of local palsies involving the extremities, 32 of infantile spinal paralysis, 30 hemiplegias, 11 cases of spinal congestion, 9 of sclerosis of the antero-lateral columns of the cord, 8 of locomotor ataxia, 10 of brain-tumor, and 1 of pseudo-hypertrophic paralysis, besides many other affections of the nervous system.

The neuralgias we usually treat with iron, arsenic, and galvanism; cod-liver oil if the patient is at all run down, and iodide of potassium if there is a syphilitic or rheumatic history. Phosphorus in solution in alcohol and glycerin has been given in some cases of facial neuralgia and sciatica, but without satisfactory results. Recently we have been giving gelsemium with very striking effect in most of the cases where it was prescribed. The dose given is rather smaller than that usually recommended, but several patients have reported dimness of vision and uncomfortable feelings in the head from seven drops of the fluid extract, so it is not often that we begin with more than ten drops at a dose. The following brief histories will illustrate the results of the treatment:

Case I.—Catharine F., æt. 38, has suffered from left trigeminal neuralgia for several years, and has tried various means of treatment, including extraction of most of her teeth, without relief. She first applied for treatment in June, 1874, and the galvanic current was used for some time with decided relief; but in December of the same year the neuralgia returned with great violence, and continued until September, 1875, when she again applied at the clinic. Galvanism was ordered, and, this proving of no avail, phosphorus was given, beginning with gr. $\frac{1}{60}$ at a dose, and increased to gr. $\frac{1}{25}$, three times a day. The pain being unabated, on February 2 the phosphorus was stopped, and six drops of fluid extract of gelsemium t. d. were prescribed. She returned on the 9th, saying that the medicine had made her sick at the stomach, and she had discontinued it after two days. She was directed to begin again with six drops, and to increase one drop daily until marked physiological effects were seen. On February 16 she was better, and on the 23d she reported the paroxysms of pain as having ceased entirely, and a slight aching in front of the ear as her only trouble. Ten drops was the utmost that this patient could take. She took cod-liver oil at the same time that she was taking the gelsemium.

Case II.—Morris W., æt. 21 years, five years ago had his first attack of neuralgia. It was severe, and was over the left eye. Three years ago had a second attack, and nine months ago a third. The present attack began about three weeks ago. The pain is in the right supra-orbital nerve, which is exquisitely tender to the least touch. Motion also increases the pain. The paroxysms begin in the morning soon after rising. The patient was ordered quiniæ sulph., gr. x night and morning.

He returned in two days, no better. He was then ordered ten drops of fluid extract of gelsemium t. d., to increase one drop daily. At the next visit, two days later, he reported himself better, and five days after beginning the gelsemium he was entirely well. He stated that when the dose had reached gtt. xvij there was a "dazzling effect upon the eyes," and the pain passed off.

Case III. was one of hemicrania, in a woman aged 35 years. She was ordered six drops of fluid extract of gelsemium

t. d., and in a week returned saying that she was well.

Dr. A. Jurasz, of Heidelberg,* has cured five cases of neuralgia with this drug. One was a case of sciatica, one of brachial and three of facial neuralgia.

Gelsemium has been used successfully in a case of chorea of long standing, which has recently been under our care. The patient, a lad of sixteen, took twenty-three drops of the fluid extract, three times a day, before marked toxic effects were observed; but the movements, which were excessive, ceased completely. I would here remark that in the treatment of chorea we generally rely upon arsenic, and in several instances we have used the remedy hypodermically with success where it had failed when given by the mouth.

Sciatica we usually treat by placing the patient in bed and applying galvanism once or twice daily; at the same time cod-liver oil and potassii iodid. are administered internally. In some severe cases, which have resisted this treatment, the actual cautery was used with success. Great care is taken to make a careful diagnosis between sciatic neuritis and ordinary sciatica. In neuritis the application of the ice-bag over the nerve for three or four hours daily is of great benefit.

In a case of sciatica which came to one of my clinics in the early part of last fall, the cause of the trouble was a cancerous growth which pressed upon both sciatics. The tumor was quite prominent over the upper part of the sacrum, and must have extended inwardly, from the difficulty with the bladder and rectum which existed.

We have had a large number of cases of hysteria, which were treated as in-patients. Many of these were the so-called "bed cases,"—women who had not walked for years, and who rarely left their beds, except for short intervals. One, a patient of Dr. Mitchell, had not walked for seventeen years. She entirely recovered her power of locomotion in six weeks.

The treatment of these cases consists in keeping the patient absolutely at rest in bed for the first two or three weeks, not allowing her to make the least voluntary effort, not even to feed herself. While they are kept in bed they are fed frequently and largely, and passive exercise is employed by means of manipulation and faradization of the limbs. During this time the patient can be brought under good moral influence.

After a few weeks we find that we can get the patient up and make her walk about. Our results in this very troublesome class of patients are remarkable, and I believe one great element of success depends on having the patient in the hospital under our immediate and constant observation, and away from the interference of injudicious friends.

In two patients of my own, one sixteen years of age and one eighteen, the first had not walked for six months and the other for nearly two years. The legs were atrophied to a remarkable extent, and had every appearance of paralyzed limbs. In one there was anæsthesia below the knees, and she said she did not feel a strong faradic current, although the muscles responded readily to a current of moderate intensity. Both of these young girls made good recoveries.

We have at present in the house an interesting case of what Dr. Seguin has called "spinal paralysis of the adult."† The patient, a man of twenty-two years of age, was seized with fever and violent pain in the back, coming on the day after he had bathed while overheated. The paralysis came on gradually in the left leg, and was complete in three days. After the leg had become palsied the left arm became affected, but never was completely powerless. There was retention of urine for two or three days; no hyperæsthesia or anæsthesia of limbs, and no contractions. The upper extremity recovered in a few days, but the leg was almost completely paralyzed when he was seen by us two years later. The muscles were atrophied and did not respond to strong induced currents, but were acted upon by the galvanic current. The limb bore a strong resemblance to one in a case of infantile palsy. This case will be fully reported, with some others of the same character, by Dr. Mitchell.

The electrical treatment is carried on in a thorough manner by a well-organized system. The patients who are ordered electricity come to the hospital in the afternoon, and one of the assistant physicians or the resident physician is always in attendance. Each treatment is recorded

* Practitioner, December, 1875. From Centralblatt f. d. Med. Wiss., No. 32, 1875.

† Spinal Paralysis, by E. C. Seguin, M.D., New York, 1874.

in a book, kept for the purpose, and the number of electrical applications a patient has had can be readily ascertained by referring to this book.

Massage is becoming more and more used at this institution in the treatment of palsies, etc. We have two well-trained and skilful manipulators, one male and one female, who are employed during the morning hours by the hospital.

The benefit of this form of treatment is, I think, more particularly seen in local paralysis and in hysterical patients whose limbs have become cold and shrunken from long disease. It is also a most valuable adjunct to electricity in paraplegias, of whatever origin they may be.

The elevation of temperature in a palsied limb after manipulation is often remarkable.

TRANSLATIONS.

NORMAL DIGESTION IN INFANTS. — H. Wegscheider has recently published a brochure on this subject, a synopsis of the contents of which is given in the *Centralblatt für Med. Wissenschaften*, 1876, No. 3.

The work is divided into six parts, the first including the literature of the subject. The remaining parts treat of the composition of the fæces. The color of the dejections in healthy infants, according to Dr. W., varies from that of the yolk of egg to a greenish yellow; the reaction is always acid; the consistence variable, from almost dry to a fluid condition. The odor is never offensive, but always that of sour milk. White fibrin-like floccules are always found through the fecal masses. Under the microscope, epithelial cells, fine hairs, and crystals of fatty acids are found. Dr. W. failed to find cholesterin or bilirubin in any instance. Examination shows the presence of casein, fat, and sugar. Extracted with water, the fæces yield a filtrate containing traces of peptone.

The whitish floccules mentioned above consist almost entirely of fat, with a few epithelial scales derived from the lining membrane of the intestine. Sugar is not found in the fæces, according to Dr. W.'s experience.

The secretions of the intestinal canal are found in the fæces in considerable quantity. Among these are mucin, biliary coloring-matter, urobilin, free cholic acid, and cholesterin. The acids of the fæces appear to be lactic, the higher numbers of the volatile fatty-acid group, palmitic and stearic acids. Lime and magnesia soaps are also found in the dejections, a portion of the food-fats being in all probability disposed of in this way. Dr. W.'s conclusions in regard to digestion in infants, deduced from these examinations of the dejections, are as follows:

The albuminous materials of the milk are entirely absorbed. The so-called milk detritus is not casein, but is essentially fat, together with intestinal epithelium in all probability. The fats are not entirely absorbed; they are excreted, in part in the form of soap, in part as free fatty acids, in part unchanged. Together with urobilin, unchanged bilirubin is found. There are no characteristic signs of cholesterin. Among the ferments, diastasic and pancreatic ferments are noticeable in small quantities. Pepsin is absent. x.

INFANTILE PARALYSIS IN THE ADULT.— M. Couty presented at a recent meeting of the Société de Biologie (*Le Mouvement Méd.*, 1876, p. 160) a patient twenty-eight years of age, suffering with acute myelitis of the anterior cornu (infantile paralysis). The paralysis, hemiplegic in form, complete in the left inferior limb, incomplete in the superior, had supervened suddenly after a fever of four days' duration, without sensitive, trophic, or cerebral troubles. The atrophy of the muscles was already noticeable in September, one month after the attack. Five months later, at the time of reporting, the atrophy of the superior limb amounted to 1 to 3 per cent., that of the inferior to 3 to 8 per cent. A month and a half after the accident the paralysis began to amend, and five months after all the movements were possible, but with diminished force, and some were limited. The posterior muscles of the leg and thigh scarcely contracted on faradization. The patient presented, in addition, decided hyperæsthesia, especially at first, in the paralyzed muscles, lowering of temperature 1° to 4° Cent. in the parts affected, and singular troubles, vaso-motor in origin.

x.

FOREIGN BODY IN THE NASAL FOSSÆ. —M. Tillaux reports (Soc. de Chirurgie: *Bull. Gén. de Thérap.*, February 15) the case of a woman of 65, who sought advice for an ozæna of two years' duration. While exploring the nasal passages with a stylet,

he felt a denuded surface of bone near the upper border of the vomer. Thinking necrosis of the vomer to exist, he awaited the formation of a sequestrum, prescribing simple antiseptic washes. Some months later, during a new exploration, he extracted a small blackish body, looking like a vesical calculus. On section this body proved to be a cherry-stone encrusted with a calcareous coating one and a half millimetres in thickness. This foreign body had destroyed the vomer, and was astride of the septum. Cases of the kind are not infrequent among children, but are rare in adults. They can only be explained by supposing a spasmodic movement during deglutition, which is designated by M. Tillaux as *d'avaler de travers*. x.

GRAPES IN FEVER. — Dr. Hartsen, of Cannes (*Centralblatt für die Med. Wissenschaften*, No. 2, 1876) recommends grapes as a valuable diet in fever.

The grape contains a considerable amount of hydro-carbonaceous matter, together with a certain quantity of potassium salts, a combination which does not irritate but, on the contrary, soothes the stomach, and consequently is used with advantage, even in dyspepsia. While considering the carbo-hydrates contained in the grape, we must not neglect the organic acids, particularly tartaric acid. Dr. H. thinks the nourishing influence of these acids too much neglected. It is indeed known that they are changed to carbonic acid in the blood, and are excreted as carbonates in the urine. Possibly, careful research might show that, under some circumstances, the organic acids are changed to fats. Dr. H. believes that the organic acids should be ranked with the carbohydrates as foods. When fresh grapes are not to be had, raisins or diluted wine might be used. x.

LOCALIZATION OF CEREBRAL LESIONS.— At a recent meeting of the Société de Biologie (*Bull. Gén. de Thérap.*, February 15), Dr. Brown-Séquard spoke of the production of direct cerebral paralysis, saying that in some cases Vulpian's hypothesis of the existence of ventricular dropsy on the side opposite to that paralyzed might be accepted; in the majority of cases, however, no liquid is found in the ventricles. The non-decussation of the pyramids might be adduced. But Serres has not observed this once in a thousand cases examined. In addition, it is at present believed by M. Brown-Séquard that the pyramids, so far from being the only paths by which voluntary movements are brought about, themselves contain but few motor fibres. This has been demonstrated by the experiments of Magendie, Schiff, Vulpian, and Brown-Séquard, which show that section of the pyramids has no influence upon voluntary movements. Clinical experience also shows that atrophy or destruction of the pyramids may take place without marked paralysis. These facts, according to M. Brown-Séquard, lead to the following conclusions. Paralysis does not occur from loss of function on the part of the encephalic centres, but as a result of irritation acting from a distance. Direct paralysis may occur, no matter what the seat or nature of the brain-lesion. It is the same as regards convulsions and contractions, which are phenomena of the same order as paralysis. The distant irritation may result either in exaggeration of movement or in its entire loss.

M. Charcot did not entirely agree with Dr. Brown-Séquard. The existence of permanent contraction he thought points to the lesion. If it affects the interior of the cerebral masses, far from the ependyma and meninges, contractions are never observed. When, however, the lesion is situated in the superficies of the brain or under the membranes, contractions are found. x.

A NEW KIND OF GRASS-GREEN SPUTUM (Dr. O. Rosenbach: *Berliner Klin. Wochenschrift*, No. 48, 1875).—Although the sputum which is described in this article has, in all probability, no pathological signification, and owes its color to the development of minute organisms, still Dr. R. thinks it worthy of description, if for no other reason than to prevent its being taken for the sputum of similar color described by Traube, which is of much more importance, both from a diagnostic and a prognostic point of view.

This sputum was muco-purulent, and of a grayish-white color, and when left in its receptacle after lapse of twenty-four hours, became of a beautiful grass-green hue. The patient by whom it was expectorated was suffering from bronchial asthma, with typical attacks of orthopnœa, during which expiration was very difficult. During these attacks the sputum was scanty in amount, very tender, and of white color, mixed with numerous air-bubbles, and contained

many grayish lumps, in which numerous octahedral crystals were discovered.

The green color is supposed to be due to quantities of contained spores, and it varied in intensity relatively with their presence in greater or less amount.

By the addition of a few drops of the green fluid to the muco-purulent expectoration of patients with tuberculosis, a similar color was induced in it, and the spores alluded to above were also seen, but in much smaller quantity. W. A.

A Case of Primary Bronchial Croup (Dr. Fr. Chvostek: *Wiener Med. Presse*, No. 50, 1875).—The patient was a soldier, aged 29, who in 1873 had had pleurisy on the right side, and some time afterwards an attack of typhus, which was of short duration, and from which he made a good recovery. From this time until August 10, 1875, he had been in good health, and retired on that evening without symptoms of coming illness. The next morning, at four o'clock, he woke suddenly and expectorated a large quantity of blood, without cough, or suffering any pain whatever. He was very much weakened by the loss of blood, and was taken to the hospital, where he was first seen by C.

The patient, upon examination, was found to have a normal pulse; the skin and visible mucous membranes were rather paler than ordinary, and he complained of giddiness and weakness upon rising. The sounds elicited by percussion of the thorax were normal, and auscultation revealed râles in the lower part of the right lung, the vesicular murmur being audible at another portion of the pulmonary apparatus. On the 12th the patient expectorated a small quantity of blood, with which there was also some false membrane. This was examined under the microscope, and found to consist of coagulated fibrin, which showed longitudinal striation, which disappeared upon the addition of acetic acid. Among the finer fibrils was seen epithelium from the alveolar cavities of the lung, which was pigmented, and had partly undergone fatty degeneration. W. A.

Butylchloral (O. Liebreich: *Deutsche Med. Wochenschrift*, No. 1, 1876.—From numerous experiments upon rabbits and also upon men, the following results as to the physiological action of butylchloral have been reached. In rabbits the beginning of the anæsthetic effect is always in the head, after the previous existence of a hypnotic state. This can be readily seen by the observer, for the animals while sitting quietly allow the head to sink, and the anæsthesia of the head begins while the extremities are still capable of reflex action upon irritation. The anæsthesia then extends itself over the entire body. Respiration and the action of the heart become slower, and if fatal doses are administered the action of the lungs ceases before that of the heart. An experiment upon a child demonstrated the existence of cephalic anæsthesia while the extremities still responded to irritants. The existence of loss of sensibility of the cornea was also shown, while the mucous membrane of the nose was still sensitive. On account of the rapidity with which the anæsthesia of the head occurs, L. believes that operations on that part of the body could be readily performed during the narcosis resulting from the use of this drug. The power which it possesses of lowering sensibility before producing a hypnotic state should not be undervalued. To induce sleep the dose should be from 0.3 to 1 grm.; for the relief of pain, 0.1–0.2 grm. several times daily, administered in powder. It has done good service in many painful affections, and also in sleeplessness from various causes. W. A.

Trephining in Epilepsy (*Nashville Journal of Medicine and Surgery*, February, 1876).—Prof. W. T. Briggs reports the case of a man, aged 30, who had been subject to epilepsy for many years, the disease following a fall upon the head. An old scar was found in the scalp about the middle of the right parietal bone, with a slight depression. A disk of bone was removed, having a small exostosis on its inner surface. At the end of six weeks he had entirely recovered from the operation. All his nervous symptoms had disappeared, and there had been no return of the convulsions, which formerly had occurred weekly.

Salicylic Acid in Acute Rheumatism (*The Boston Medical and Surgical Journal*, February 24, 1876).—Dr. Charles P. Putnam reports the case of a child, five years of age, who had been suffering from acute rheumatism for five days, and who had a pulse of 130, a temperature of 102.7°. Salicylic acid was given in five-grain doses every hour when the patient was awake. After the first three doses there seemed some improvement; after the seventh dose she went to sleep, and only took two more doses during an entire night. In the morning she was markedly better, and forty-eight hours after the treatment began the temperature was 99.9°.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, APRIL 15, 1876.

EDITORIAL.

PROGRESS IN THE UNIVERSITY.

BUT four or five years ago the Medical Department of the University of Pennsylvania was in the very heart of the city, crowded into buildings old-fashioned, inadequate, incapable of being made the seat of an institution in which medical science could be taught in a manner befitting its complexity and value. Seemingly conservative and immovable in its policy, it appeared hopeless to expect that in any reasonable length of time our medical alma mater should be what its age and former rank demanded of it. But a new spirit had already been breathed into the Board of Trustees of the University, and had led them, for the sake of other departments, to take steps which involved the sale and consequent demolition of the old University buildings and the erection of new ones. About this time also the Faculty of Medicine, visited by the spirit of progress, and pressed upon by the eager competition of the New York schools, deliberately gathered together the young talent which had sprung up about it and inaugurated a system of clinical teaching which has been growing ever since. The prospect of being removed from the heart of the city into an almost rural suburb was by no means a pleasant one to those especially interested in the medical department; but time has justified the action of the Board of Trustees, and has shown them to be possessed of that judicious boldness which, although it may appear to be at the moment mere rashness or even recklessness, is the parent of almost every great enterprise. Moving, of course, involved the erection of new buildings; and the liberality of the trustees has been such that the new structure for the Medical Department is the best for its purpose in this country, if not in the world, and affords abundant space not only for lecture-rooms, but also for the laboratories which are the necessities of modern teaching.

Whilst the scheme for removal was crystallizing, a movement for the erection of a hospital was inaugurated. Originating in the young clinical corps, and chiefly by their efforts carried to a successful result, though warmly approved of by the whole medical faculty and actively co-operated in by some of its members, it came just at the critical moment. If it had been sooner carried out, the anomaly of a pretentious hospital in the heart of the city, without surrounding open space, with its front upon a narrow street and its back upon an alley, would have probably presented itself. If it had come later, not only would the business interests of the city have been found so prostrated that the large sum needed could not have been raised, but the school would have been moved without a hospital, and probably have been ruined. The organization of the hospital, of course, gave rise to a great deal of discussion. It might be interesting to some to trace the very curious steps through which the final result was achieved; but space is wanting. Suffice it to state that, although at first a large part of the staff held their positions by the will of the medical faculty, yet finally all became professors in the hospital, the appointees of the trustees of the University.

From the inception of the hospital movement, the goal of a medical department with a graded course of laboratory, didactic, and clinical teaching—lasting over three years—was always held distinctly in view by those who were most active in that movement.

The various trips to Harrisburg in company with Professor Agnew, as the representative of the faculty, gave abundant

opportunity to the members of the hospital staff to discuss with him all the points in regard to the methods and practicability of the longed-for reforms. All being possessed with an earnest desire for these reforms, it was a comparatively easy matter to agree as to their nature and as to the methods of effecting them, and Dr. Agnew expressed the desire of urging the proposed changes upon the medical faculty. What took place in the faculty meetings no one outside knows or ought to know; but it is probable that, unable to agree upon any distinct proposition or plan, they compromised the matter. For a communication was received by the trustees at their meeting last July, which, as contained in a printed report to be spoken of later, is as follows:

"The vast acquisitions of medical and surgical knowledge which have been garnered within the last quarter of a century by the concentration of thought upon special departments, together with the pre-eminence given to practical training in the laboratory and hospital, have so enlarged the domain of the profession that the brief period allotted to medical instruction as preliminary to obtaining the degree of *Doctor of Medicine* in all the schools in this country, with a single exception, is entirely inadequate to impart more than the *most elementary* principles of professional knowledge.

"The Faculty of the Medical Department have for some years been impressed with the necessity of making some change in the policy of the school. It has been the subject of many earnest deliberations, and they have only been deterred from bringing the subject officially before your Board by certain difficulties connected with building accommodations and professional support, which have hitherto seemed insuperable, and which are necessarily involved in any scheme contemplating a change in medical education. The erection of a new and commodious Medical Hall with every appointment for practical work, and the possession of a Hospital constructed after the most approved models, have removed one of the obstacles in the way of *putting into operation* a better plan of instruction; and believing that another, viz., the endowment of the professorial chairs, will be overcome at no distant day, the Faculty, that they may not appear indifferent either to the demands of the times or the reputation of a school which the great body of the profession in this country expects to be a leader in everything relating to medical education, beg leave to say that they are ready to meet a Committee of Conference from your body in relation to the above subject."

Such a document, officially acknowledging the marked inferiority of the University scheme to that of the "single exception," of course attracted a great deal of attention in the Board of Trustees. For, although the readers of the *Times* are aware of the relative merits of the methods followed in Harvard and in our medical schools, the laymen of the Board of Trustees could hardly be expected to have such knowledge. To us it is rather surprising, though very gratifying, that one of our two Faculties should acknowledge the truth of what the *Medical Times* has been so blamed for asserting,—namely, that the diploma of Harvard is the only American one which guarantees a knowledge beyond the most "elementary principles" of medicine.

It has been stated, in the daily *Times* of this city, that the communication was referred to the Medical Committee of the Board of Trustees, Dr. Geo. B. Wood being Chairman; that this committee reported in favor of a conference between the Faculty of Medicine, a Committee of the Hospital Staff, and the Medical Committee of the Board of Trustees; but that the Medical Faculty asked that they be not required to hold this conference, as it concerned what was in a measure their private business and should not be discussed before any one not having an interest in the matter, the Hospital Staff being in their opinion an independent body, and not a portion of the medical department of the University. Very properly the Board of Trustees granted their request, and the subject of the medical department was referred to a special committee, whose report has very

kindly been sent to us by some person unknown. It is signed by Fairman Rogers, Chairman, and is certainly a very able document. In it it is stated that weekly meetings have been held throughout the entire winter, that conferences have been had with both the Hospital and the Medical Faculties, and that information has been assiduously sought in various other quarters.

It is not necessary to reiterate the reasons assigned by the Committee for the conclusion reached. Every reader of the *Times*, every thoughtful medical man in the country whose perceptive powers have not been affected by long habit or by self-interest, is fully aware of the degradation which the colleges are bringing upon the profession.

The main point is that the opinion is openly and unanimously expressed by a very large committee of the Board of Trustees, that the University is bound in honor to the State, which has put the lives of its citizens in its hands, to change its curriculum, and that "the Committee believes that even if we were unwilling to make such changes, we should be forced into doing so by the action of other medical schools, unless we are content to see the University school take the second rank in a career in which it has always held the first place."

The Committee believes that the medical department should be ultimately reorganized upon the following basis:

"The time of instruction should be extended to three years; the diploma being granted after examination at the end of the third year.

"The annual course of instruction should be extended.

"The instruction should be graded substantially as follows:

"IN THE FIRST YEAR.

"Anatomy: with constant dissection.
"Physiology.
"Inorganic Chemistry.
"Materia Medica.
"Pathology.
"Histology.

"IN THE SECOND YEAR.

"Theory and Practice of Medicine.
"Theory and Practice of Surgery.
"Theory and Practice of Obstetrics.
"Therapeutics.
"Organic Chemistry.
"Physiology.
"Anatomy.
"All the Clinical branches.

"IN THE THIRD YEAR.

"The same studies as in the second year, but more advanced, and with the clinical branches and laboratory work predominating.

"There should be weekly examinations by the several professors on the lectures in their respective branches, and examinations at the end of each course on the studies pursued during the course, for the purpose of testing the qualifications of the student for admission to the next course.

"Finally, when the proper time comes, examination for matriculation should be required, in order that the class may be somewhat more evenly prepared to profit by the instruction of the first year.

"The fees of the students under such a system should be paid to the Treasurer of the University, the expenses of the school should be borne by the Board of Trustees, and the Professors should be paid fixed salaries."

Finally, the reasons are given for the union of the Medical and Hospital Faculties; and—very wisely, as we think—the line is drawn between the teachers of specialties and those who instruct in general branches. It is plainly absurd to expect a student to be an ophthalmologist, an aurist, a neurologist, a dermatologist, etc., before granting him his diploma. The only hospital chairs which are recommended to be placed in the Medical Faculty are, therefore, the Professorship of Clinical Surgery, the Professorship of Clinical Medicine, the Professorship of Diseases of Women and Children, and the Professorship of Pathological Anatomy and Histology; Diseases of Women and Children constituting so large and important a subject as not to be considered a specialty in the narrower sense of the term.

The Committee finally acknowledges it to be impracticable fully to inaugurate the reform at present, but suggests that the rearrangement of the professorships be made at once; and accordingly, at the last meeting of the Board of Trustees, Dr. John Neill, Dr. William Pepper, Dr. William Goodell, and Dr. James Tyson were severally elected to the chairs enumerated above.

As no immediate change has been decided upon, it may be asked, What does it all amount to? what has been gained? Evidently very much. As was the case with slavery, the moment discussion is allowed and actively carried on, that moment the ultimate fate of the evil in hand is determined. During the winter a committee embracing more than one-third of the Board of Trustees, led by physicians such as Drs. Geo. B. Wood and S. Weir Mitchell and by laymen such as Messrs. John Welsh and Fairman Rogers, has given a patient and elaborate hearing to conservatives and radicals; has examined carefully into the whole bearings of the subject; and finally has pronounced a unanimous verdict in accordance with what is plainly right. The Board of Trustees has justified its committee by taking the first step as recommended by it. Revolutions never go backward; and it does not seem possible but that very soon the medical department of the University of Pennsylvania shall again take its old place as the leading professional school in the country. The next step is to raise an endowment fund, and then the whole matter will be accomplished. If only the trustees are moderate in their ideas of the amount required, and if only the absence of any calamity and the success of the Centennial Exhibition will allow the business interests of our city to recover themselves a little, the success of the hospital seems a guarantee that within a year the necessary amount may be obtained; especially as, although no meeting of the collecting committee has yet been held, two gentlemen have agreed to head the list with subscriptions of fifteen thousand and ten thousand dollars respectively.

Assuredly, then, the party of progress, as did Saint Paul at the Three Taverns, may thank God and take courage.

No. 208 South Fifth St., Philadelphia,
April 1, 1876.

DEAR SIR,—I enclose an opinion upon the question of the extent of punishment of one who knows of but neglects to disclose the crime of abortion. I regret that the matter has been so long delayed, and remain

Very sincerely yours,
A. Sydney Biddle.*

It was at one time held that to cause an abortion was murder, but the law was afterwards modified so as to regard it as a high misprision or misdemeanor only, not murder (4 Black., 198; 1 Hawk. P. C., 94); and it was, therefore, not technically a felony, which was a crime punishable by forfeiture of lands or goods, or both; but any doubt as to the exact position in the scale of crime was set at rest by legislation.

By the act of March 31, 1860, procuring or attempting to procure an abortion is made a felony. (Purd. Dig., 341, § 135.) The question is asked, What is the punishment, if any, for not disclosing the knowledge of an abortion having been performed? The offence seems to come within the definition of a *misprision of felony;* which is "a criminal neglect either to prevent a felony from being committed by another, or to bring to justice a person known to be guilty of felony." (Bish. on Cr. Law, § 507, vol. i.; 1 Russ. on Crimes, 45.) The penal code of 1860 prescribed no punishment for such an offence, although it prescribed generally for the punishment of accessories before and after the fact, a degree of guilt greater than a misprision, and less than that of a principal; but by § 178 (Purd. 371, § 298) it is provided that "Every felony, misdemeanor, or offence whatever, not specially provided for by this act, may and shall

* Mr. Biddle may not be known to some of our country readers as one of the most distinguished of the younger members of the Philadelphia Bar.

be punished as heretofore." It has been held that this clause was intended to leave all other crimes and misdemeanors as they existed before the act. (Comm. *v.* Mohn, 2 P. F. S. 243.)

No other statute provision seems to exist in regard to this offence, so that it must remain now as a common-law offence, and punishable as such.

At common law "misprision of felony is taken for a concealment of felony, or a procuring of the concealment thereof, whether it be felony by the common law or by statute." "For this offence every person is punishable by fine and imprisonment at common law." (1 Hawk. P. C., 73, §§ 2 and 3; 1 Hale, P. C., 374.)

By the statute of 3 Edw. I. c. 9, the punishment for this offence in the case of sheriffs or bailiffs is prescribed, but none provided for in the case of common persons.

I have been unable to find a case in Pennsylvania upon the subject, but it seems clear that the offence still exists here as at common law, and as such is punishable as at common law by fine and imprisonment, at the discretion of the court. But this discretion would seem to be modified by our statutes. Blackstone says, iv. *121, "The punishment of this in a public officer, by the stat. Westm. I. 3 Edw. I. c. 9, is imprisonment for a year and a day, in a common person imprisonment for a less discretionary time, and in both fine and ransom, at the king's pleasure;" and Coke, in the 3d Inst. 140, says that "the concealment of felonies in sheriffs or bailiffs of liberties is more severely punished than in others, *viz.*, by imprisonment for one year, and ransom at the will of the king."

It seems, therefore, that if the punishment in the case of an officer is limited to a year and a discretionary fine, it would not be greater for a private person in England.

That part of the 3 Edw. I. c. 9, however, is not in force in this State. (Robert's Dig., § xx.)

Where death of the woman ensues from the procuring of an abortion, the punishment here is imprisonment not exceeding seven years, and a fine not exceeding five hundred dollars; and where death does not ensue, the punishment is imprisonment not exceeding three years, and fine not exceeding five hundred dollars. It would therefore seem that the punishment for the knowing of and concealing the offence of abortion is discretionary with the court to anything less than the full extent of the foregoing punishments respectively, as death ensued or not: in the former case anything less than seven years' imprisonment and fine of five hundred dollars, in the latter anything less than three years' imprisonment and the same fine.

CORRESPONDENCE.

NEW YORK, March 20, 1876.

TO THE EDITOR OF THE PHILA. MEDICAL TIMES:

DEAR SIR,—One would think that the subject of diphtheria had already been sufficiently discussed here in the various societies; but it has been so increasingly and alarmingly prevalent during the last three years that it cannot but still prove one of the deepest interest to all who are actively engaged in the practice of medicine in New York.

At the meeting of the Public Health Association, February 24, Dr. John C. Peters read an instructive paper on the history of the affection, in which he reminded the members that, instead of being a new disease, it is really one of the oldest of which anything is certainly known. Hippocrates clearly mentions a fatal case of it; but the writer of antiquity who describes it most fully and perfectly is Aretæus, in the first century. He speaks of the two forms of the disease (one slight, and quite common, and the other malignant, and more rare), and his treatment consisted, in part at least, of the local application of honey and the sulphate of copper.

During the Middle Ages we have no record of diphtheria whatever; but in the sixteenth century considerable was written upon the subject by Spanish and Italian authorities. It was then, as afterwards, confounded, however, with scarlatina, and again with membranous croup.

Dr. Peters here gave a *résumé* of the present discussion, especially in England, on the identity of the latter with diphtheria, alluding to a number of the authorities on both sides, but did not express any opinion of his own.

Many hold the opinion that Washington died of diphtheria; but he thought it probable that this could not be so, as there was no record of there being any other cases in the neighorhood, and there was nothing in the symptoms, as narrated, which could not be accounted for by acute laryngitis or œdema glottitis. It seems to be positively certain, however, that the nephew of Napoleon and the Empress Josephine died of it, and that Queen Hortense suffered from a severe attack of the disease.

So far as Dr. Peters was able to ascertain, the first American writer on the subject of diphtheria was a Dr. Douglass, of Boston, about the year 1725; and in 1771 Dr. Bard, professor of the practice of medicine in King's

College, New York, published a very excellent monograph on the disease, which he called by the name of *angina suffocativa*. This was translated into French in 1810, and, as Bretonneau was familiar with the work, it seems quite likely that he was to some extent indebted to it for the ideas embodied in those teachings which have made his name classical in connection with the subject.

A discussion on the causes and nature of diphtheria took place at an adjourned meeting of the Society the following week, which was participated in by Prof. Chandler, the president, and Drs. W. Robinson and J. Lewis Smith. The latter considered that the laryngeal or tracheal complication, preventing the entrance of air into the lungs, was the cause of one-half of all the deaths from the disease.

The Academy of Medicine is also devoting special attention to diphtheria at present.

On the evening of March 16, Dr. C. E. Billington read a paper on the disease and its treatment, which was especially valuable as it was based entirely upon clinical and personal experience; his observations having been made with great care and extending over a large number of cases. The records of the Bureau of Vital Statistics showed, said he, that in 1873 there were over 400 deaths from diphtheria in this city, in 1874 over 1000, and in 1875 no less than 2329. This terrible epidemic he thought could not be checked by any therapeutic methods, but could only be stamped out by the most revolutionary and active sanitary reform. Dr. Billington has enjoyed unusual facilities for the study of the disease, as he is one of the district physicians of the Demilt Dispensary, and has seen altogether about three hundred cases; of which he has careful records of about one-half.

As a result of his observation and study, he has become fully convinced that diphtheria is a local disease, at least primarily; and, though this is the opinion of a minority of the authorities on the subject, he is glad to have his views corroborated by such observers as Drs. Jacobi and J. Lewis Smith. This conclusion is based upon the following points:

First. The local affection commences first.

Second. The gravity of the general symptoms is in proportion to the severity of the local manifestations.

Third. The results of treatment seem to substantiate this view.

In the study of the nature of the disease, he said, three elements were to be considered:

(1) The *contagium*, which he did not propose to discuss on this occasion.

(2) The inflammation, denuding the fauces of epithelium, and resulting in membranous exudation; and

(3) The effects reflected from the inflammation upon the system in general, more or less septicæmic in character.

Dr. Billington's treatment consists mainly in local disinfection, together with the most careful and unremitting watching and attention. The agents which he regards as most useful are the following, in the order in which they stand in his estimation: tincture of the chloride of iron, lime-water, and glycerin; and after them, salicylic and carbolic acids, sulphite of sodium, chlorate of potassium, etc. One formula which he uses in almost every case is as follows:

℞ Tinct. ferri chlor., f℥iss;
Glycerinæ,
Aquæ, āā f℥j.—M.
S. Teaspoonful every hour or half-hour.

Besides being very effective, it has the merit of being pleasant to the taste, which is a great desideratum for children, especially when the dose has to be so frequently repeated. If the child is under two years, one drachm of the tincture of the chloride of iron is enough, and if vomiting follows the administration of the medicine, it should not be given so often.

In connection with the above, Dr. Billington formerly employed the following:

℞ Potass. chlor., ℥iss;
Glycerinæ, f℥ss;
Liq. calcis, f℥iiss.—M.

A teaspoonful of this was alternated with a dose of the former; so that the patient would receive one or the other every half-hour. As a substitute for the chlorate of potassium mixture, he now generally uses the following:

℞ Acid. salicylic., gr. x—xv;
Sodii sulphit., gr. xxx—xlv;
Glycerinæ, f℥ss;
Aquæ, f℥iiss.—M.

Here the salicylic acid is rendered soluble by the addition of three times its weight of sulphite of sodium (borax also has the same effect), so that in this prescription we have the advantages of both these reputed antiseptics, which are indicated theoretically, and really seem to be of considerable practical benefit. It is of great importance that in every case in which it is practicable some sort of spray should be used upon the throat; and the most convenient instrument with which to accomplish this is the ordinary little perfumery spray-apparatus now in such general use. In order to annoy the child as little as possible, it is best to employ the spray immediately after a dose of the medicine is administered. The combination generally used by Dr. Billington is the following:

℞ Acid. carbolic., ♏ x;
Liq. calcis, f℥iv.—M.

He believes that the nasal douche or syringe has saved many lives; and even when the nasal passages, apparently, do not seem affected, it is often useful in reaching portions of the mucous membrane inaccessible to the spray. If, therefore, the breath should remain fetid after the employment of the latter, it

ought to be resorted to; and the mixture mentioned above, containing the salicylic acid, is as good as any other for the purpose.

In adults or large children it may occasionally be of service to apply carefully strong tincture of iron (say two parts of the tincture to one of glycerin) to circumscribed patches of membrane; but, as a rule, topical applications of caustics or astringents by the probang or camel's-hair brush do much more harm than good, as they cause exhaustion of the little patients from their struggles to resist, excite an increased flow of blood to the part, and really occasion further thickening and spread of the membrane.

Dr. Billington expressed the opinion (which is hardly substantiated by other observers) that quinine is worse than useless in diphtheria in children; being objectionable, if for no other reason, on account of its bitter taste, which makes every dose dreaded by the patient.

In cases attended with high secondary fever, a full dose of quinine, he thinks, may occasionally do good, but five grains of calomel has worked better in his hands. He cannot subscribe to the prevalent opinion that diphtheria will never bear antiphlogistic treatment.

Dr. Billington then proceeded to give an interesting summary of the cases which he had personally observed, prefacing his statement with an allusion to the well-recognized disadvantages to be encountered in dispensary practice. According to his observations, about sixty-five per cent. of all cases of diphtheria occur in persons under five years of age, and it is quite a rare affection among adults (except in the peculiar experience of certain irregular practitioners), even when individuals are constantly and to the fullest extent exposed to the disease. He has also found that about sixty per cent. of all the cases will recover without any treatment at all, and that about five per cent. will prove fatal whatever plan may be adopted. Out of one hundred and two carefully tabulated dispensary cases treated by him, fourteen died, and eighty-eight recovered; while of seventeen cases in private practice, one died, and sixteen recovered.

The usual duration of the attack, from the commencement of the treatment to the disappearance of the diphtheritic membranes, was only from four to six days. Twenty-four cases in private practice, treated on the same principles by Dr. Wm. Darken, house physician to the Demilt Dispensary, show even a better result; as not a single death occurred directly from the disease, though one of the children died several weeks after the acute attack, from some unexplained cause.

A still later series of fourteen cases treated by Dr. Billington in conjunction with Dr. W. E. Bullard (in order that the patients might receive the fullest possible amount of attention) all recovered, so that we have fifty-five cases altogether, with only one death directly attributable to the disease. In a large number of these the attack was of very great severity.

From his observations, Dr. Billington has been induced to believe that a laryngeal or tracheal complication can often be prevented or aborted by the use of the spray, and that even after the membranes have been fully formed in this locality it is of very great service. Calomel has also proved useful in many cases. The inhalation of *hot* vapor, he thinks, renders the surfaces more favorable to the absorption of septic materials, and therefore injurious.

He did not express a positive opinion as to the identity or non-identity of croup and diphtheria, but apparently seemed to hold to the former view.

In conclusion, he regretted that a bureau had not been instituted in this city for the investigation of the all-important subject of diphtheria, to which all the members of the profession would have been urged to communicate their views and experience. If this had been done, a mass of interesting facts would have been accumulated, from which, doubtless, certain definite and positive conclusions might have been derived, so that there would not be the uncertainty and difference of opinion as to the proper handling of the disease which now seems to be prevalent in the minds of medical men.

Dr. Robert A. Barry gave it as his opinion that diphtheria was primarily a *constitutional* affection, death from it being due, as a rule, to asthenia; and that the local manifestations were secondary, and merely the indicator of the internal disorder. In regard to the treatment, he had found astringent and detergent gargles very useful, and mentioned particularly sulphite of sodium, tincture of the chloride of iron, and muriate of ammonia for the purpose. If the patients were too young for gargles, he employed inhalations of lime-water or medicated steam. But, in general, he relied mainly on constitutional support, trusting to such agents as milk, beef-tea, quinine, iron, carbonate of ammonium, and alcoholic stimulus. It was also of the utmost importance, he thought, to give careful attention to the hygienic surroundings of the patient, and to put all cases of the disease under strict quarantine.

Dr. John Burke, a practitioner of large experience, also considered diphtheria a constitutional disease. He had tried all sorts of remedies and local agents, with varying success, and had learned to rely mainly on a supporting and stimulating treatment. He spoke favorably, especially, of large doses of quinine. When the larynx or trachea was attacked, he depended on lime-water locally and a continued high temperature, in addition to the constitutional measures.

Dr. H. T. Hanks also made some interesting remarks, in which he spoke of the type of

diphtheria prevailing in New England fourteen years ago, when he was a student of medicine in Vermont. At that time one-half the cases were in adults; caustics were invariably used locally, and fully one-half the patients died. He believed the disease was local until after the second day, and coincided with Dr. Billington's views in regard to the treatment. Out of twenty-seven cases of his own in this city, six had died. He considered it of the utmost importance, and usually quite possible, to stop the spread of the disease in a family when it has once appeared. These twenty-seven cases of his had occurred in twenty-one families. In four of these families there were no less than five children; yet only one child in each suffered from the disease. For this purpose he relied mainly on disinfection, and the agent which he had found most reliable was the sulpho-carbolate of lime. The subject is to be further discussed at an extra meeting of the Academy.

Another excellent paper, based on clinical experience, was read on the 3d of March, by Dr. V. P. Gibney, before the Medical Journal Association, on "*Peri-nephritic Abscess in Children.*" This, he said, was a rare affection in adults, but still rarer in children, most of the works on diseases of children scarcely alluding to it at all. Up to the present time, only three cases have been reported: one in Germany, and two in America (by Dr. Bowditch, in 1870). Yet Dr. Gibney related no less than nine new cases; so that either his experience must have been very extraordinary, or else the disease is more frequent than is supposed, but very seldom diagnosticated.

Of these nine cases, he saw eight personally; most of them at the hospital for ruptured and crippled, with which he is connected. The other occurred in the practice of a friend in Brooklyn. In describing the affection, he prefers the term *abscess*, as most of the cases of peri-nephritis result in this way. The essential element of the disease is an inflammation of the cellulo-adipose tissue surrounding the kidney. In seven of the cases, abscess resulted, and in two, resolution took place. He related all the histories minutely, and they proved exceedingly interesting. There is generally an acute attack, accompanied by pain in the seat of inflammation (and sometimes also in the hip, thigh, and knee), and some febrile reaction; with a considerable limp (the hand resting on the thigh to support the weight of the body), and sometimes total inability to walk. The pain is often so acute that the slightest motion causes intense agony, and is paroxysmal in character, causing the little patient to shriek out when it comes on. There are also immobility of the spine and spasm of the psoas muscle. At last the evidences of fluctuation are found in the lumbar region. No exciting cause could be discovered in any of Dr. Gibney's cases; but two or three of the children were of strumous diathesis.

The most important point in regard to the disease is the diagnosis, which is beset with many difficulties; so that the utmost charity should be exercised towards the mistakes of others. Excluding a number of rarer and less important affections (briefly but concisely alluded to by Dr. Gibney), the great danger is from confounding it with hip-joint and Pott's diseases. The position of the limb and attitude of the child are precisely those of the second stage of hip-joint disease; but the element of time must be carefully considered in deciding on any case. We generally find that a child who was perfectly well a fortnight before has developed these acute symptoms *suddenly*. Then, the physical signs of disease of the hip-joint are wanting; though the extreme pain occasioned the child often prevents a satisfactory examination.

It is almost impossible to diagnose the affection from Pott's disease in many cases (for the results of inflammation may even cause the vertebræ to seem implicated); and Dr. Gibney frankly confessed that in more than one-half of the cases he did not recognize their true nature until it was cleared up by the evidences of fluctuation. The first case he saw he diagnosticated at first as acute synovitis of the hip-joint, and in one or two of the others the spinal brace was actually applied.

The *treatment* is to consist of appropriate constitutional measures, and the local application of soothing or stimulating lotions. When fluctuation is detected, the abscess should be evacuated by a bistoury or the aspirator (perhaps with more safety by the latter.)

The *prognosis* is favorable. Every one of the nine cases recovered. In two of the cases, which resulted in suppuration, no operative interference was made. In one the pus burrowed along the course of the psoas muscle, forming an immense abscess on the thigh, which discharged enormous quantities of pus; but the child made a good recovery after all.

In the other, the patient was lost sight of for a week (at the time the abscess should have been opened), and at the end of that time it was found that it had become perceptibly diminished in size. It afterwards entirely disappeared spontaneously, and there was no history of its evacuation through the bowels or lungs. This case was followed by a temporary cellulitis on the thigh, near the knee-joint. Early incision prevents the profuse discharge of pus seen in the former instance, and terminates the case very much sooner.

The *duration* of the affection is from six weeks to six months; two or three months being the usual length of time.

Age of patient. These nine cases occurred in children from one and a half to ten years of age.

All of them have been seen since 1873.

At a recent meeting of the Neurological

Society Dr. S. D. Powell read a paper entitled "A Contribution to the Pathology and Treatment of Pertussis," in which he advocated, as a curative measure, a single complete etherization of the patient, extending over a period of from thirty to fifty minutes. He hit upon this plan accidentally, as he found to his surprise that a child suffering from whooping-cough, who was thus etherized for the reduction and dressing of a fracture, did not whoop any more afterwards. In this case the patient was kept under the influence of the anæsthetic for about fifty minutes. Dr. Powell related six cases altogether treated by this method, and hoped that it would be given a more extended trial by the gentlemen present and the profession at large.

In two of his cases the paroxysmal stage of the disease had lasted three or four weeks at the time the ether was tried, and in the others was of longer standing. In one or two of them it was necessary to repeat the inhalation a second time, though not to keep the anæsthetic up for so long as at the first.

In regard to the etiology and pathology of whooping-cough, he believed it to be the result of inoculation by a specific poison (like that of scarlatina or measles, for instance), and that it is a pure neurosis affecting the pneumogastric, the whoop being due to the action of the crico-thyroid muscle, as is the case in laryngismus stridulus.

Dr. B. F. Dawson thought that the ether-inhalation had been tried in too late a stage of most of the cases, as well as in too small a number, to establish its efficacy; but considered the method eminently worthy of further trial. He then spoke of his success in the treatment of pertussis by quinine, in accordance with the views of Professor Binz, the results of which he had published some time ago.

He spoke also of the efficacy of chloral, especially at night, and in certain cases in which quinine failed, as first employed here by Dr. P. Brynberg Porter.

Dr. Porter stated that he had given both quinine and chloral an ample trial, and had been much pleased with the action of each; one or the other being generally successful in cutting short the attack.

More recently he had been experimenting with the fluid extract of *castanea vesca* (chestnut leaves), as suggested to him by Dr. John S. Parry, of Philadelphia, and this also had acted very favorably in a large number of instances. He was of the opinion that there was no specific for whooping-cough, though he should embrace the first opportunity of trying the ether-inhalations.

Dr. J. C. Peters said that belladonna had more often failed than been successful in his hands; but that he considered conium, opium, and chloral all useful. He thought the disease primarily affected the mucous membrane of the air-passages, though it was afterwards characterized by a nervous element, and that a great part of the irritation so often present was due to the accumulation of tough and stringy mucus. For the liquefaction of this, the alkalies, administered just before a paroxysm, as recommended by Niemeyer, proved useful. It had also been proved that the alkalies materially increased the effect of conium.

Dr. Allyn thought that possibly the effect of the ether-inhalations might be explained on the ground of the profound impression or shock on the system caused by it, just as whooping-cough had been known to be suddenly checked by a severe and sudden fright. He had not much faith in therapeutics in this affection; in most cases trusting simply to surrounding the child with the best hygienic conditions. The great point was to guard against complications, and contend against them when they did arise.

Dr. Hammond said that in all diseases which got well of themselves, as well as in those which usually prove fatal (such as chorea and locomotor ataxia. for instance), the number of remedies recommended was legion, and that too much faith must not be put in any of them.

As to the pathology of whooping-cough, he could not agree with Dr. Dawson (who had mentioned the fact) that, because mucus from the fauces of a patient suffering from it applied to the throats of guinea-pigs had given rise to the disease in them, the contagious element resided in the bacteria or other similar organisms present. Hydrophobia and other diseases might be communicated in the same way; but he could hardly believe that the same bacteria would be capable of producing such different diseases as pertussis, hydrophobia, hay-asthma, and diphtheria.

The Commencement of the College of Physicians and Surgeons came off at Steinway Hall on the evening of March 1, when degrees were conferred on a graduating class of ninety-three. The Rev. Dr. Bellows delivered a very excellent address, on the subject of "Quackery;" and the class-valedictory was by Frederick A. Lyons, of New York, in the form of a poem. The four-hundred-dollar prize of the Alumni Association was awarded to Dr. Thomas E. Satterthwait, of this city, for his essay on Connective Tissue. The alumni dinner had been held the evening previous.

The Eighty-sixth Annual Report of our oldest dispensary, the "New York," shows that 42,162 patients were treated by its physicians during the year 1875, and that since its first establishment no less than 1,659,950 have been the recipients of its charity.

The Annual Report of the Superintendent of Roosevelt Hospital shows that during the past year 1559 patients were treated, of whom 736 were discharged cured, 374 improved, and 123 unimproved; 164 patients died, and 162 remained in the hospital December 31, 1875.

The hospital expenses were $74,446.75. One hundred and thirty-two patients paid full or partial board, and all the others were entirely free.

Fordyce Barker has been appointed one of the surgeons to the Woman's Hospital, to take the place left vacant some time since by the resignation of Marion Sims. PERTINAX.

PROCEEDINGS OF SOCIETIES.

ATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JANUARY 13, 1876.

(Continued from p. 332.)

The PRESIDENT, DR. WILLIAM PEPPER, in the chair.

Bovine Phthisis. By DR. R. M. BERTOLET.

THESE specimens are exhibited to the Society in order to afford the members an opportunity of familiarizing themselves with the more important lesions occurring in this disease. The question whether this disease is transmissible by inoculation and by other means upon various unaffected animals, and also possibly to the human species, is the one which most nearly concerns us. Although numerous experiments have been made in this direction, and nearly a unanimous opinion prevails as to the infectiousness of bovine tubercular matter, yet it appears desirable that further investigations be instituted upon this so vital and important a question. I regret to state that the numerous inoculations upon dogs, cats, and rabbits, which I made with fresh matter a few hours after the cow had been killed, all failed. This must not, however, be regarded as negative testimony, for the excessive heat of midsummer and the deficient attention to the confined animals during my enforced absence, as well as the suppurative cellulitis, caused a decimating mortality among the animals operated upon. Under a more favorable combination of circumstances, I have no doubt whatever that I will be able shortly to furnish conclusive proof of the infectious character of bovine tubercle.

The cow from which these specimens were obtained was extremely emaciated before being killed, had great dyspnœa and cough when driven rapidly. The liver, spleen, and kidneys contained numerous yellow tubercles, the size of a pea, seated in the parenchymatous substance. The enveloping capsules of the organs, notably of the spleen, were studded with pearl-like tumors of various sizes. The mesentery, and the diaphragm both upon its pleural and abdominal surfaces, were literally packed with these pedunculated, mostly small-pearl-sized tumors; often several of them have become agglutinated into one large mass, so as to form tumors fully the size of a walnut. Many of these growths contain calcareous depositions, as also do the lymphatic glands; these are all greatly enlarged, the mesenteric glands forming a perfect cordon, many of them exceeding a man's fist in size. The bronchial glands are even more hypertrophied, one of them measuring ten inches in length and between two and three inches in width.

The lungs upon both sides are firmly adherent. A few of the tumors were scattered upon the surface of the pleuræ; most numerous towards the diaphragm. The middle and lower lobes principally, contained many indurated pneumonic patches; they are surrounded by considerable fibroid thickening of the connective tissue, with more or less extensive calcareous depositions in the same. Many of these caseous centres have broken down, forming large vomicæ, containing very offensive purulent masses. The bronchial tubes and tracheal mucous membrane were free from tubercle, merely slightly congested. The free margins of the lobes were highly emphysematous.

The solitary glands of the small intestine, as well as Peyer's patches, were swollen and ulcerated. The heart was apparently healthy, but a few small tubercles were found buried in its muscles beneath the endocardium. No tubercles could be discovered in any other portion of the muscular system.

These bovine tubercles may be regarded as an exaggerated form of the human tubercle, for histologically they are identical. We observe in them the same large epithelioid cells, multinuclear giant-cells, and adenoid interstitial substance; the same remarkable absence of nutrient vessels.

The specimens were derived from an animal in Newark, Delaware, where the disease prevailed with a limited yet striking mortality. The first cow affected was an Alderney brought from a distance, and the disease extended from her to the stock of the farmer who had purchased her.

The term "cattle-disease," which has been applied to this affection, of course means nothing. The proper name would be *tuberculosis* or *bovine phthisis;* by the Germans, the name *Perlsucht* has been well applied.

There are one or two points in connection with the epidemic in this locality which have been investigated by the physician of the place, Dr. Henry, which have a striking bearing, if true, on the question of the transmissibility of the disease. Thus, the grandson of the farmer had been brought from the city in a state of perfect health, and he was nourished upon the milk of this Alderney cow as something exceptionally excellent. He soon acquired a serous diarrhœa, and, at the suggestion of Dr. Henry, the supply of milk was taken from another unaffected cow, as this one had already evinced symptoms of ill health; the boy recovered without further treatment, at once. While ill of the disease, some parties of a neighboring city had desired

to purchase the affected animals, who afterwards acknowledged that they had intended using the meat for making Bologna sausages.

Larynx from a case of diphtheria: tracheotomy. By Dr. W. G. PORTER.

Gracie P., aged 4 years and 9 months, after a day or two of feverishness and malaise, began to complain of sore throat. On Thursday, January 6, Dr. J. G. Allen, the family physician, was sent for, and he found her in a feverish condition, with diphtheritic deposits on the tonsils. On Friday she was worse, and on Saturday respiration became so much embarrassed, although the tonsils looked better, that I was asked to see her, with a view to the performance of tracheotomy. The only deposit to be seen on inspecting the fauces was on the uvula; but, as the difficulty in breathing was extreme, the operation of tracheotomy was performed at 11 P.M. on Saturday, January 8. Chloroform was used, and two ligatures were passed around the isthmus of the thyroid gland, and the isthmus divided between them. The first three rings of the trachea were divided, and, as the only tracheotomy-tube which I had with me was too large, a silver wire was passed by a double stitch through each side of the opening in the trachea, and the wires fastened to loops of tape passed around the shoulders, thus securing the patency of the opening in the trachea. There was no hemorrhage. On opening the trachea a large quantity of thick, tenacious mucus and some false membrane was expelled, and immediately afterwards the child ceased to breathe; the heart, however, continued to act, and artificial respiration speedily restored the child. During the rest of the night she slept pretty well and took considerable nourishment. On Sunday she still continued to do well, taking nourishment and playing with her doll. In about twenty-four hours false membrane was noticed in the wound. On Sunday night I removed the wires and inserted a tracheotomy-tube. On Monday her condition was fair, the only really bad symptoms being the presence of false membrane in the wound. On Monday evening, however, she began to be restless, and the breathing again became hurried and difficult, terminating in a choking spell, which was partially but not entirely relieved by the expulsion of some thick, tenacious mucus. At 1 A.M. there was another and still more severe paroxysm, the child beating her breast and abdomen with her hands, and becoming perfectly blue in the face. This was followed by great prostration, and the child gradually sank and died. During the whole evening there was tympanitic distention of the abdomen, and frequent but small evacuations from the bowels of a watery character and accompanied by straining.

Post-mortem examination, thirty-six hours after death. The larynx was found filled with false membrane, patches of which were found in the trachea, which was very red and inflamed. The bronchial tubes, up to the bifurcation, were completely filled up by an extremely thick and tenacious mucus. The lungs were congested, but there was no pneumonia.

Dr. NANCREDE asked whether death was sudden, or anything had been discovered blocking up the bronchi; also, whether there was recession of the chest-walls.

Dr. PORTER replied that the death could not have been called sudden. Early in the evening there was a sudden attack of dyspnœa, when he was sent for; but on practising artificial respiration the child promptly rallied. At 1 o'clock A.M. there occurred a second attack like this, when the child was again resuscitated; but at 2 o'clock it began gradually to sink, and died. The bronchi were found filled with mucus, but nothing more, and there was slight recession of the chest-walls.

Dr. NANCREDE said he had operated this autumn, and the child did very well for two and a half days. The child began gradually to sink, and died. There was here marked recession of the walls of the chest.

Dr. A. F. MÜLLER said he had two cases of operation this fall, in which the children both did well for twenty-four hours, when there occurred this same gradual sinking and death. There was, however, very marked struggling, and decided recession of the chest-walls. The struggling was as marked as before the operation.

Femur, with osteophytes, from a case of psoas abscess. By Dr. HARRISON ALLEN.

The femur was taken from the body of a negro, who had long been the subject of psoas abscess. The abscess had pointed below Poupart's ligament, prior to his admission into the Philadelphia Hospital in March, 1875. Disease of the femur was diagnosed, since a probe could be carried towards this bone, and an outgrowth from the inner side of the shaft, near the neck, could be imperfectly defined through the relaxed and emaciated limb. The femur is remarkable for the amount of secondary osteophytes thrown out near the point of exit of the old abscess.

Tape-worm from a trout. By Dr. A. F. MÜLLER.

The tape-worm was taken from a trout,—*Salmo fontanalis*,—and it is not at all uncommon, as I have found as many as four, in the small intestine usually of quite a number of specimens. The fish are fed on beef-lights; and this will probably account for the presence of tænia in the fish, which were in every instance artificially propagated.

SCROFULOUS SORES.—A Scotch clergyman states in the *Edinburgh Medical Journal* for March, 1876, that three grains of corrosive sublimate in a pint of whisky constitutes an almost infallible remedy in scrofulous sores or runnings. A rag dipped in this twice or thrice a day should be kept on the ulcers until healed.

REVIEWS AND BOOK NOTICES.

CYCLOPÆDIA OF THE PRACTICE OF MEDICINE. Edited by Dr. H. VON ZIEMSSEN. Vol. X., Diseases of the Female Sexual Organs. By Prof. CARL SCHROEDER. Pp. 575. New York, Wm. Wood & Co., 1875.

Again have we the pleasure of calling the attention of our readers to another volume of Ziemssen's splendid Cyclopædia. Although numbered vol. x. of the series, it appears before its turn "in consequence of its great interest and importance, and in compliance with the expressed wish of many subscribers." For this forethought we return our thanks, and those of the many admirers of Prof. Schroeder.

This remarkable book shows what the untiring industry and the rare genius of one man can accomplish; but therein lies its fault. An encyclopædia should be the work of many men, and should embody exhaustive essays by different writers. In this manner a far greater fulness is attained than when the work is intrusted to but one man. Hence, as every author rides one hobby or more, such a work as the one before us is unequal. Some subjects are treated at length, others too jejunely. For instance, having recently a case of acute vaginitis induced by a slovenly use of chromic acid, we turned to Schroeder for help. We were rewarded by just seven sterile lines, beginning with "As a rule, the treatment can be mainly expectant." This conciseness is only rivalled by that of a celebrated history of Iceland, whose index contained the words, "For Snakes in Iceland, see chap. lv." On turning to this reference the reader finds that chap. lv. condenses the subject in the following sentence: "There are no snakes in Iceland."

On the other hand, such subjects as fibroid and ovarian tumors and hypertrophic elongations of the cervix are treated with a fulness far beyond the scope of a mere handbook, such as this work really is. In the construction of the other volumes of Ziemssen's series several master-workmen were engaged, and we wonder why the same course was not pursued here. Spiegelberg should have had the subject of ovarian tumors; Simon, that of recto- and vesico-vaginal fistulæ; while no one better than Carl Braun could have handled the subject of hypertrophic elongations of the cervix.

Again, it strikes us that the author does not always write from a personal experience. Nor do we think that his opportunities for clinical observation have been so great as those of some other German gynæcologists. His treatment lacks adaptability, and in some cases does not seem to be ballasted by that sterling common sense which is gained only in the stern school of experience. Here, indeed, is the weak point of the book.

These, however, are but slight faults, mere flecks in a work so full of merit. Taking it as a whole, as a book for reference it is unsurpassed. The bibliography on every subject, however trivial, is a storehouse in itself, from which many inferior men could build a reputation. The cuts are numerous, and, although not of a very high order, are sufficiently well executed to illustrate the text fully. From this encomium justice demands the exemption of the woodcut on page 555, which purports to represent the operation for ruptured perineum. In this figure the denuded surface looks something like a chaste fig-leaf, but more like a headless butterfly, pinned on to the vulva. The pathological portion of this work is complete and thorough, so admirably done that it will long be appealed to as a standard authority. As in his midwifery, so in this his second literary venture the author has compressed a wonderful amount of information. He wastes no words; but this very conciseness makes him sometimes obscure. To the practitioner interested in the diseases of which it treats, we warmly recommend this book. We ourselves would not part with it for its weight in gold.

GLEANINGS FROM EXCHANGES.

THE ELASTIC BAND IN TENOTOMY (*Canada Medical and Surgical Journal*, February, 1876).—Dr. A. A. Henderson describes a case of talipes varus in which, after dividing the tendon of the tibialis anticus, he substituted the following dressing instead of the usual complicated shoe:

The puncture was covered with adhesive plaster, and the foot secured in position by means of a broad strip of plaster placed around it just behind the toes, having a smaller strip inserted so as to form a loop at the outer margin of the foot, just at the root of the small toe. Another broad band of plaster with a loop formed at its outer portion was placed around the leg above the knee.

These loops were then connected by an elastic band, composed of two pieces of rubber tubing, attached by means of a hook to the loop at the root of the small toe, and by means of a loop with tape attached to the plaster above the knee. The tape was found a great convenience as a means of regulating the amount of tension required from the rubber.

No boot was worn for fourteen days, and during that time the child was not allowed to walk. The sticking-plaster was renewed from time to time as it became partially detached, and the tension of the rubber was carefully regulated.

At the expiration of that time the child was allowed to walk; an ordinary light shoe was put on, and the loop passed out through an incision in the side. The elastic tubing was hooked into it, and the other end secured to

the back of a belt passing around the waist; it was kept in position by passing through a keeper situated at the outer and posterior part of a band passed around the thigh. The child walked with the toes everted and the sole of the foot placed properly upon the ground. The result was entirely satisfactory.

FRACTURE AND DISLOCATION OF THE ANKLE (*The Boston Medical and Surgical Journal*, February 24, 1876).—Dr. S. Cabot reports the case of a man, æt. 53, whose foot was dislocated backward upon the tibia, carrying with it the tip of the inner malleolus and the lower end of the fibula. The adjacent parts were much swollen and ecchymosed. By forcible extension and elevation of the foot and depression of the tibia the dislocation was finally reduced, but it instantly returned upon relaxing the pressure. An external side splint was applied, and after the dislocation had been reduced, the foot was suspended to a cradle by a sling under the heel, and a sand-bag was placed upon the lower end of the tibia. This held the foot well in place and was quite easily borne. The sand-bag was removed in six days, the foot being kept suspended by the heel for another six days. At the end of this time, no tendency to dislocation remaining, the leg was put upon an inside splint, and made a good recovery, the joint being freely movable when put into a dextrine bandage on December 21, one month after the beginning of treatment.

The interest of this case, aside from the rarity of the injury, lay in the efficiency of this simple apparatus, which completely overcame a deformity usually very intractable and not infrequently requiring division of the tendo Achillis.

THEORY OF THE ACTION OF COMPRESSED AIR (*Boston Medical and Surgical Journal*, March 23, 1876).—Dr. Schnitzer observes that the inspiration of compressed air and its expiration into a rarefied air increase the force of the heart's impulse, and consequently that the blood is driven into the arteries with increased pressure; on the other hand, the reflux of the venous blood towards the right side of the heart is slightly obstructed. Thus the general effect of the use of compressed air, as above described, would be an increased amount of blood in the larger circulation, and its diminution in the lesser or pulmonary circulation. The inspiration of rarefied air causes a contrary effect: a diminution of blood in the larger or systemic circulation, and its increase in the lesser or pulmonary circulation. These results are modified, however, by the larger amount of oxygen absorbed by the inspiration of compressed air, and again by the larger product of carbonic acid produced by the expiration in a rarefied air. Another element still further complicates the result: the effect of pressure exercised upon the capillary circulation.

The therapeutical applications of the inhalation of compressed air are summarized by Dr. Schnitzer: the respiratory force may be increased, the pulmonary capacity may be enlarged and its ventilation promoted. The therapeutical indications are applicable to the following pathological conditions: (1) General feebleness of the respiratory organs; (2) chronic bronchial catarrh; (3) pulmonary catarrh and the first stage of phthisis; (4) emphysema; (5) nervous asthma, in which there is no organic lesion of the heart or lungs.

A REMARKABLE CASE OF ANEURISM (*The Lancet*, February 5, 1876).—Mr. Pemberton has tied the external iliac artery in a case presenting features of unusual occurrence and interest. The patient, a country gentleman of forty-seven, had led a life of great activity, especially in horse exercise; had been syphilitic, but was otherwise vigorous and healthy. Six months previously, an aneurism formed in the left popliteal region; shortly after, a second, at the apex of Scarpa's space; and when seen by Mr. Pemberton there was a third under Poupart's ligament, all being in the same limb. The lower tumors were as large as the closed hand, and the upper the size of a goose-egg. The artery was secured about an inch from the bifurcation by an antiseptic ligature. The immediate result of the operation was that all pulsation ceased in the three aneurisms, and has never returned (nine days having now elapsed). The patient is well, the pulse having never exceeded 84, and the wound without disturbance under antiseptic dressings.

It need hardly be said that the all-important question here was, to what extent would the collateral circulation be established? How much of the limb could be preserved from gangrene? Let the position of affairs for a moment be reviewed. The main artery, extending from the seat of ligature below the bifurcation of the common iliac to a little above the origin of the anterior and posterior tibials, arrested, *at four distinct points*, by absolute barriers to circulation,—*by one ligature* and three solid aneurisms! Despite these difficulties, the existing conditions seem to assure the preservation of the limb to about the middle third of the leg, a marvellous instance of what collateral circulation can do when tried to its uttermost.

TRACHEOTOMY IN CROUP (*The Medical Press and Circular*, February 9, 1876).—At the conclusion of an elaborate paper on this subject, Dr. Wm. Thomson formulates his views as follows:

I. Croup may be treated medically in the early stages.

II. If the disease advances and obstruction increases in spite of medicine, tracheotomy ought to be undertaken.

III. The danger of aggravating the disease by opening the trachea has been exaggerated, and is, with ordinary precautions, *nil*.

IV. Even as a palliative measure the oper-

ation is justifiable, and, considering the chances of recovery, ought to be recommended.

V. The opening is more easily made above the thyroid isthmus, and is as effectual as when made below it.

MISCELLANY.

THE death of the distinguished physician and chemist, Henry Letheby, medical officer of health and food analyst for the city of London, occurred in that city, March 29. He was born in 1816, became bachelor of medicine in 1843 and M.A. in 1858. He was lecturer on chemistry and toxicology in the London Hospital, chemical analyst to the corporation of London, and a fellow of the Linnæan and Chemical Societies. He was the author of "Reports on the Sanitary Condition of the City of London," of numerous papers and reviews, and of what is probably the most useful work on food in the language.

THE *Pacific Medical and Surgical Journal* defines the regulation of prostitution by law to be "A law for the protection of men from the diseases of women, and the exposure of women to the diseases of men; a law to provide places and salaries for male inspectors and for police officers; a law to furnish young men as well as married men with the means of gratifying their lust with impunity; a law to lower the standard of public morals, to discourage matrimony, to diminish the growth of population, and to inoculate the American republic thoroughly with the customs and vices of the Old World."—*Atlanta Medical and Surgical Journal.*

NOTES AND QUERIES.

PHILADELPHIA, April 3, 1876.

TO THE EDITOR OF THE MEDICAL TIMES:

DEAR SIR,—Having read the editorial in your issue of March 18 on the subject of the bill which our Society has lately had introduced into the Legislature, and perceiving that it would be very likely to give to the medical profession and to the public generally an erroneous idea of us and of our attempted action with regard to vivisection, I hereby propose to make a plain and unvarnished statement of the facts of the case, to which I beg that you will give publicity through the columns of your journal.

At the beginning of the winter, believing that it would be wise and proper to attempt to put a stop to vivisection for class demonstration, unless the animals experimented upon were under the influence of anæsthetics, and having ascertained that a considerable portion of the medical faculty approved of our undertaking, we had a bill drawn up by one of the counsel for the Society, which we considered precisely covered the ground that we wished to take. The bill is as follows:

"Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania, etc.

"SECTION 1. That if any person shall cut, wound, torture, or otherwise ill-treat any animal, for the purpose of illustrating or demonstrating any fact, process, or theory already known to science or medicine, he shall be deemed guilty of a misdemeanor, and on being convicted thereof before any alderman, justice of the peace, or magistrate, shall be fined in a sum of not less than ten dollars and not more than twenty dollars for the first offence; and not less than twenty and not more than fifty dollars for any subsequent offence; and if said fine or penalty and the costs of the proceedings shall not be paid, then said alderman, justice of the peace, or magistrate shall commit such offender to the county prison, there to remain until discharged by due course of law.

"SECTION 2. That no experiment performed upon any animal which shall first have been rendered insensible to pain, and which shall have been killed before returning to consciousness, shall be deemed an offence against the provisions of this act."

In this form it was introduced into the Senate by Mr. Horatio Gates Jones, and referred to the Committee on Vice and Immorality, which reported it favorably. Before it was printed, however, a most important alteration was made in it by omitting "already known" before the words "to science or medicine." This was done without our knowledge or consent, by whom we have not been able to ascertain; but it made of course an entirely new thing of our bill, since, as it then read, it would apply to vivisection for all purposes, and not merely, as we had intended, for class illustration. In this altered form the bill passed its first reading. Our attention having then been called to the change that had been made, we at once wrote to Mr. Jones asking to have the words "already known" re-inserted, so that the bill might stand as it was originally drawn up. This was done by Mr. Jones in the form of an amendment when the bill was being discussed on its second reading. We then supposed there would be no further opposition made to it, as it had received the approval of one who himself was a well-known vivisector; but, to our surprise, it was lost when the vote was taken on its final passage.

It is true that we received a proposition from the Committee appointed by the College of Physicians to attend to the bill to insert the words "before a class" after "illustrating or demonstrating:" but this we refused to do for several reasons: first, because we had prepared an extremely moderate bill, asking for so little that we felt it ought not to be objected to; and, second, because we thought its whole purpose might be defeated by any such amendment, as physicians might easily evade it by operating upon animals before one or two students, and maintaining that they did not constitute "a class." I do not propose, however, to enter into any discussion upon the merits of our bill, but merely to show how poorly sustained is the charge that the editorial referred to makes against us of being in "danger of overleaping the boundary between earnestness and fanaticism."

Yours, truly,
CAROLINE E. WHITE,
President of "Women's Branch" of
"Penn. Soc. for Prevention of Cruelty to Animals.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM MARCH 26, 1876, TO APRIL 8, 1876, INCLUSIVE.

MCCORMICK, CHAS., SURGEON.—To proceed to New York City, and, on arrival, report by letter to the Surgeon-General. S. O. 65, A. G. O., March 31, 1876.

BENTLEY, E., ASSISTANT-SURGEON.—Assigned to duty at Camp Independence, Cal. S. O. 25, Department of California, March 18, 1876.

CARVALLO, C., ASSISTANT-SURGEON.—Ordered to Fort Union, New Mexico, for medical treatment. S. O. 32, District of New Mexico, March 24, 1876.

FITZGERALD, J. A., ASSISTANT-SURGEON.—When relieved by Assistant-Surgeon Ainsworth, to report in person at these headquarters for assignment to duty. S. O. 34, Department of the Columbia, March 24, 1876.

AINSWORTH, F. C., ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Sitka, Alaska. S. O. 34, c. s., Department of the Columbia.

FINLEY, J. A., ASSISTANT-SURGEON.—Granted leave of absence for one month from June 1, 1876, with permission to apply for an extension of one month. S. O. 54, Department of the Missouri, March 23, 1876.

BEDAL, S. S., ASSISTANT-SURGEON.—To report to Lieut.-Col. G. P. Buell, Eleventh Infantry, for duty as senior medical officer with the "Scouting Camp" to be established on Devil's River, Texas. S. O. 50, Department of Texas, March 22, 1876.

COMEGYS, E. T., ASSISTANT-SURGEON.—Assigned to duty at Plattsburg Barracks, New York. S. O. 58, Military Division of the Atlantic, April 4, 1876.